REMARKS

This Amendment is in response to the Office Action mailed January 15, 2003. Claims 1-20 are pending in the application and have been rejected. Applicants respond to the rejection of claims 1-20 as follows.

Response to specification objections

The disclosure was objected to because of informalities on Page 5, line 21 and lines 22-23. Applicants have amended the specification to correct the noted informalities on Page 5 and reconsideration and withdrawal of the rejection to the specification are respectfully requested.

Response to claim objections

Claim 9 was objected to because of an informality and Applicants have amended claim 9 to correct the noted informality and accordingly, reconsideration and withdrawal of the objection to claim 9 are respectfully requested.

Response to claim rejections - 35 U.S.C. § 103

Claims 1, 2 and 4-20 were rejected under 35 U.S.C. § 103 as being unpatentable over Polycarpou, U.S. Patent Publication No. 2002/0012199, in view of Kobayashi, U.S. Patent No. 6,424,495. Polycarpou is prior art under 35 U.S.C. § 102(e) on the basis that Polycarpou has a filing date which pre-dates the filing date of Applicants' application. Pursuant to 35 U.S.C. § 103, subject matter developed by another that qualifies as prior art under 35 U.S.C. § 102(e) shall not preclude patentability under 35 U.S.C. § 103 where the subject matter and the claimed invention at the time the invention was made was owned by the same person or subject to an obligation of assignment to the same person. The present application is assigned to Seagate Technology LLC which is the same Assignee as the Assignee for Polycarpou, U.S. Publication No. US 2002-0012199 - which issued as U.S. Patent No. 6,466,410. Accordingly,

Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1, 2 and 4-20 under 35 U.S.C. § 103 on the basis of Polycarpou in view of Kobayashi.

Claim 3 was rejected under 35 U.S.C. § 103 as being unpatentable over Polycarpou and Kobayashi as applied to claims 1 and 2 above and further in view of Suzuki, U.S. Patent No. 6,381,090. Similarly Polycarpou is prior art under 35 U.S.C. § 102(e) and is assigned to the same entity as the present application and thus should not preclude patentability under 35 U.S.C. § 103. Accordingly, Applicants respectfully request reconsideration and allowance of claim 3.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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MARKED-UP VERSION OF REPLACEMENT PARAGRAPHS

Page 5, lines 12-20:

As shown, leading edge portions 206, 208 and trailing edge portion 212 include an elevated SLIP interface 220, 222, 224 facing the disc surface as illustrated schematically, which cooperatively form the dynamically imbalanced SLIP interface 202-1 having a predicted tipped interface 204-1 at ~~leading~~trailing edge portion 210. The predicted tipped interface 204-1 includes a textured interface surface 226 to provide a tribological surface for stiction control as shown schematically. Thus, for contact starts and stops, the supported slider 200-1 tips toward the predicted tipped interface 204-1 at ~~leading~~trailing edge portion 210 of the slider 200-1.

Page 5, line 21 through Page 6, line 2:

In the illustrated embodiment ~~leading~~trailing edge portion 212 is proximate to inner side portion 130 and the predicted tipped interface on the ~~leading~~trailing edge portion 210 is proximate to the outer side portion 132 of the slider. As previously described, rotation of discs 104 creates an air flow path illustrated by arrow 138 in FIG. 2 including a tangential flow component between the inner and outer side portions 130, 132 of the slider. Thus in the illustrated embodiment, the predicted tipped interface 204-1 is positioned proximate to the outer side portion 132 of the slider 200-1 in alignment with the flow direction 138 imposed by rotation of the discs so that windage of the rotating disc tips the slider toward the predicted tipped interface 204-1.

Page 6, line 19 through Page 7, line 5:

As shown, rails 230, 232 include elevated SLIPs 250, 252, 254. SLIPs 250, 252, 254 extend from raised surfaces of bearing rails 230, 232 to provide an elevated SLIP interface structure

which extends above bearing surfaces of the slider 200-2 for contact interface. SLIPs 250, 252, 254 are formed on leading edge portions 206, 208 of the slider 200-2 and trailing edge portion 212 to cooperatively form a dynamically imbalanced SLIP interface. SLIPs 250, 252 on leading edge portions 206, 208 are dynamically balanced between opposed side portions of the slider. SLIP 254 at trailing edge portion 212 is dynamically unbalanced relative to trailing edge portion 210 to form a predicted tipped interface at ~~leading~~trailing edge portion 210. Trailing edge portion 210 includes a bearing surface interface 256 at the predicted tipped position. In the embodiment shown, the dynamically imbalanced SLIP 254 is formed on the inner portion 130 of the slider and the bearing surface interface 256 is formed on the outer portion 132 to induce tipping of the slider in the direction of air flow between the inner and outer side portions of the slider.

Page 7, lines 5-16:

As illustrated in FIG. 6, the bearing surface interface 256 has a textured or roughened surface 258 to provide a desired roughness average Ra for stiction control. The textured or roughened surface 258 is fabricated by known manufacturing techniques on a portion of the raised bearing surface of ~~leading~~trailing edge portion 210. The textured or roughened surface 258 of the bearing surface interface 256 is a small portion of the total area of the raised bearing surface of the slider and/or rail 232 and thus does not significantly affect the aerodynamics of the raised air bearing for read-write operations. The textured or roughened surface 258 can have random texture or a patterned texture. FIGS. 7-8 illustrate an embodiment of a patterned texture. Patterned texture includes a plurality of surface depressions 260 formed in the raised bearing surface 262

in a selected or predicted pattern by photolithography or laser techniques.

Page 8, lines 13-21:

In the illustrated embodiment, leading edge portions 206, 208 include a plurality of elevated SLIPs 304-1, 304-2, 304-3, 306-1, 306-2, 306-3 formed on raised tier 296 of rails 290, 292. SLIPs 304-1, 304-2, ~~3043~~304-3, 306-1, 306-2, 306-3 are dynamically balanced between opposed leading edge portions 206, 208 of the slider. Trailing edge portion 212 includes an elevated SLIP interface structure having interface portions 308-1, 308-2 formed on the U-shaped ledge 300. Interface portions 308-1, 308-2 on trailing edge portion 212 are dynamically imbalanced relative to trailing edge portion 210 to form a bearing surface interface 310 at a predicted tipped position proximate to the ~~leading~~trailing edge portion 210 as shown in FIG. 10.

Page 8, line 23 through Page 9, line 3:

In the embodiment shown in FIGS. 10 and 13, elevated interface portions 308-1, 308-2 are formed of a strip 312 deposited between opposed sides of rail 290. Portions of deposited strip 312 on legs 314, 316 of U-shaped ledge 300 form multiple SLIPs 308-1, 308-2 to form a dynamically imbalanced SLIP interface with predicted tipped bearing surface interface 310 as shown in FIG. 10. A tip portion of the stepped ~~bearing~~tier 298 at the tipped bearing surface interface 310 is textured as illustrated schematically to form a roughened tribological bearing surface for stiction control for contact starts and stops. The textured surface area at the tipped interface 310 is relatively small in comparison to the elevated bearing surface area so that the roughened surface portion does not significantly interfere with dynamics of the air bearing.

MARKED-UP VERSION OF REPLACEMENT CLAIMS

9.(Amended) A slider comprising:

a slider body having a bearing surface; and

dynamically imbalanced SLIP interface means for providing a predicted tipped interface for supporting the slider for contact starts and ~~starts~~stops.

10.(Amended) A disc drive comprising:

a base chassis;

at least one disc supported for rotation relative to the base chassis; and

at least one head supported relative to the disc surface ~~for read-write operations~~, the head including a slider including a slider body having a leading edge, a trailing edge and opposed first and second side portions extending along a length of the slider between the leading edge and the trailing edge and the slider body including an elevated slider integrated pad on the first side portion dynamically imbalanced relative to the second side portion to form a predicted tipped interface for the slider on the second side portion.